

**CRYPTOGRAPHIC AUTHENTICATION  
FOR TELEMETRY WITH  
AN IMPLANTABLE MEDICAL DEVICE**

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**Abstract**

Integrity of a wirelessly telemetered message communicated between an implantable medical device and an external programmer is authenticated by encoding the message. The message is encrypted based on a random number or time stamp and a secret key. The message is authenticated by encryption and decryption or by executing a  
10 hash function.